1892MNRAS..52..398M

G.M.T. 1892.	h	
July 1	11·7	Te. *n*. Titan *s*. −4·1
	11·8	En. ζ
	12·8	Mi. θ
	13·8	Di. β
	15·2	Te. θ
	16·3	Di. Sh.
2	13·9	Te. ζ
	15·9	Te. β
3	12·0	Rh. Ecl. R.
	12·5	Te. θ
	13·5	Rh. ε
	14·5	Te. δ
4	7·6	Di. β
	10·8	Di. γ
	11·2	Te. ζ
	13·0	Di. η
	13·2	Te. β
5	9·9	Te. θ
	10·7	Rh. ζ
	11·9	Te. δ
	13·3	Rh. β
	14·2	Di. θ
	15·3	Te. Ecl. R.
6	8·5	Te. ζ
	10·5	Te. β
	13·4	Te. γ
	15·4	Te. η
7	9·2	Te. δ
	12·6	Te. Ecl. R.
	14·1	Te. ε
	17·0	Rh. θ
8	7·9	Te. β
	7·9	Di. θ
	10·1	Di. δ
	10·8	Te. γ
	12·8	Te. η

G.M.T. 1892.	h	
July 8	14·1	Di. Ecl. R.
	15·6	Di. ε
9	9·3	Titan α
	10·0	Te. Ecl. R.
	11·4	Te. ε
	13·2	Titan ε
10	8·1	Te. γ
	8·2	Rh. η
	10·1	Te. η
11	7·3	Te. Ecl. R.
	7·8	Di. Ecl. R.
	8·7	Te. ε
	9·4	Di. ε
12	7·4	Te. η
	8·0	Rh. δ
	10·5	Di. ζ
	12·7	Di. β
	12·9	Rh. Ecl. R.
	14·5	Rh. ε
14	11·7	Rh. ζ
	14·3	Rh. β
15	9·7	Di. γ
	11·9	Di. η
16	13·1	Di. θ
	15·3	Di. δ
	16·6	Titan ζ
17	6·1	Titan η
19	9·3	Rh. η
21	9·1	Rh. δ
	13·8	Rh. Ecl. R.
	15·5	Rh. ε
23	12·8	Rh. ζ
	14·4	Rh. β
25	9·3	Titan α
	13·1	Titan ε

Ephemeris for Physical Observations of Mars, 1892. By A. Marth.

Greenwich Noon.	Angle of Position of ♂'s Axis.	Areographical Long.	Lat. of Centre of Disc.	Apparent Diameter.	q	Q	E	Light-ratio.
1892.	°	°	°	″	″	°	°	
May 1	11·13	78·92	−12·52	10·80	1·34	259·00	41·27	0·339
3	10·51	59·76	12·82	11·01	1·36	258·67	41·16	0·353
5	9·90	40·61	13·12	11·22	1·38	258·35	41·04	0·369
7	9·29	21·47	13·41	11·44	1·40	258·05	40·90	0·385
9	8·69	2·33	13·68	11·66	1·41	257·76	40·74	0·402
11	8·10	343·21	13·94	11·89	1·43	257·48	40·56	0·420
13	7·51	324·11	14·18	12·13	1·44	257·22	40·36	0·439
15	6·93	305·02	14·42	12·37	1·46	256·98	40·14	0·459
17	6·36	285·94	14·64	12·62	1·47	256·75	39·90	0·480
19	5·81	266·88	−14·85	12·88	1·48	256·54	39·63	0·502

1892MNRAS..52..398M

Greenwich Noon.	Angle of Position of ♂'s Axis.	Areographical Long.	Lat. of Centre of Disc.	Apparent Diameter.	q	Q	E	Light-ratio.
1892.	°	°	°	″	″	°	°	
May 21	5·26	247·83	−15·04	13·15	1·49	256·35	39·34	0·526
23	4·73	228·80	15·22	13·42	1·50	256·17	39·02	0·551
25	4·21	209·80	15·39	13·70	1·50	256·02	38·67	0·577
27	3·70	190·81	15·54	13·99	1·51	255·88	38·30	0·605
29	3·21	171·85	15·68	14·28	1·51	255·77	37·90	0·634
31	2·74	152·91	−15·80	14·59	1·50	255·68	37·47	0·665
June 2	2·28	134·00	15·91	14·90	1·50	255·61	37·00	0·698
4	1·84	115·12	16·01	15·22	1·49	255·56	36·50	0·733
6	1·42	96·26	16·09	15·55	1·48	255·54	35·97	0·769
8	1·02	77·44	16·15	15·88	1·47	255·55	35·41	0·808
10	0·64	58·64	−16·20	16·22	1·45	255·59	34·81	0·848
12	0·28	39·88	16·24	16·57	1·43	255·66	33·17	0·891
14	359·94	21·16	16·26	16·93	1·40	255·76	33·49	0·936
16	359·63	2·47	16·26	17·29	1·37	255·90	32·77	0·983
18	359·34	343·82	16·25	17·66	1·34	256·07	32·01	1·032
20	359·08	325·21	−16·22	18·04	1·30	256·29	31·20	1·084
22	358·84	306·64	16·18	18·42	1·26	256·55	30·34	1·138
24	358·64	288·12	16·12	18·80	1·21	256·86	29·44	1·194
26	358·46	269·65	16·05	19·19	1·16	257·23	28·49	1·253
28	358·32	251·22	15·96	19·58	1·11	257·66	27·50	1·313
30	358·20	232·84	−15·86	19·97	1·05	258·16	26·45	1·376
July 2	358·11	214·51	15·75	20·36	0·98	258·74	25·35	1·440
4	358·06	196·23	15·62	20·75	0·91	259·41	24·21	1·505
6	358·04	178·00	15·48	21·13	0·84	260·18	23·02	1·572
8	358·05	159·82	15·33	21·51	0·77	261·08	21·77	1·639
10	358·09	141·68	−15·16	21·88	0·69	262·12	20·48	1·707
12	358·16	123·60	14·99	22·24	0·62	263·34	19·15	1·775
14	358·26	105·57	14·81	22·58	0·54	264·77	17·78	1·841
16	358·40	87·58	14·61	22·91	0·46	266·47	16·37	1·906
18	358·57	69·64	14·41	23·22	0·39	268·53	14·92	1·969
20	358·76	51·74	−14·21	23·51	0·32	271·06	13·45	2·029
22	358·98	33·88	14·00	23·78	0·26	274·23	11·97	2·085
24	359·23	16·06	13·79	24·02	0·20	278·31	10·49	2·137
26	359·50	358·28	13·58	24·23	0·15	283·72	9·04	2·183
28	359·79	340·52	13·37	24·41	0·11	291·1	7·66	2·223
30	0·10	322·78	−13·16	24·55	0·08	301·5	6·44	2·256
Aug. 1	0·41	305·05	12·96	24·66	0·06	316·1	5·48	2·282
3	0·74	287·34	−12·77	24·74	0·05	335·1	4·98	2·300

1892MNRAS..52..398M

Greenwich Noon.	Angle of Position of ♂'s Axis.	Areographical Long. of Centre of Disc.	Lat.	Apparent Diameter.	q	Q	E	Light-ratio.
1892.	°	°	°	"	"	°	°	
Aug. 5	1·07	269·64	−12·58	24·78	0·05	355·7	5·07	2·310
7	1·40	251·93	12·41	24·78	0·06	13·6	5·74	2·312
9	1·73	234·22	−12·25	24·74	0·09	26·9	6·88	2·306
11	2·05	216·50	12·11	24·67	0·12	36·3	8·10	2·292
13	2·36	198·76	11·98	24·57	0·17	43·13	9·53	2·271
15	2·66	181·00	11·87	24·43	0·23	48·15	11·02	2·242
17	2·95	163·21	11·79	24·26	0·29	52·00	12·54	2·207
19	3·21	145·39	−11·72	24·06	0·36	55·04	14·06	2·166
21	3·45	127·54	11·67	23·83	0·44	57·49	15·58	2·119
23	3·67	109·65	11·65	23·57	0·52	59·51	17·07	2·067
25	3·86	91·71	11·65	23·29	0·60	61·21	18·53	2·012
27	4·02	73·73	11·67	23·00	0·69	62·66	19·95	1·954
29	4·14	55·70	−11·72	22·68	0·78	63·89	21·33	1·893
31	4·23	37·62	11·79	22·35	0·87	64·95	22·66	1·831
Sept. 2	4·29	19·49	11·88	22·01	0·95	65·87	23·95	1·768
4	4·32	1·31	11·99	21·66	1·03	66·67	25·19	1·704
6	4·31	343·08	12·13	21·30	1·11	67·37	26·38	1·640
8	4·27	324·80	−12·29	20·94	1·19	67·98	27·52	1·577
10	4·20	306·46	12·46	20·57	1·26	68·51	28·61	1·515
12	4·10	288·07	12·66	20·20	1·32	68·97	29·65	1·454
14	3·96	269·64	12·87	19·83	1·38	69·36	30·64	1·394
16	3·80	251·15	13·10	19·45	1·44	69·70	31·58	1·336
18	3·60	232·62	−13·35	19·08	1·49	69·98	32·48	1·279
20	3·37	214·04	13·61	18·72	1·54	70·22	33·33	1·244
22	3·11	195·41	13·88	18·36	1·58	70·41	34·14	1·172
24	2·83	176·74	14·17	18·00	1·62	70·57	34·90	1·121
26	2·52	158·02	14·47	17·64	1·65	70·69	35·61	1·072
28	2·18	139·26	−14·78	17·29	1·68	70·77	36·28	1·026
30	1·81	120·45	15·10	16·95	1·70	70·83	36·92	0·981
Oct. 2	1·42	101·60	15·43	16·62	1·72	70·86	37·52	0·938
4	1·01	82·72	15·76	16·29	1·73	70·87	38·08	0·898
6	0·58	63·80	16·10	15·97	1·74	70·85	38·60	0·859
8	0·13	44·84	−16·45	15·65	1·75	70·82	39·09	0·822
10	359·66	25·85	16·80	15·34	1·76	70·77	39·55	0·787
12	359·16	6·83	17·15	15·04	1·76	70·70	39·98	0·753
14	358·65	347·77	17·51	14·75	1·76	70·61	40·38	0·721
16	358·12	328·68	17·87	14·46	1·75	70·52	40·75	0·690
18	357·58	309·55	−18·23	14·18	1·75	70·41	41·09	0·661

1892MNRAS..52..398M

Greenwich Noon.	Angle of Position of ♂'s Axis.	Areographical Long. of Centre of Disc.	Areographical Lat. of Centre of Disc.	Apparent Diameter.	q	Q	E	Light-ratio.
1892.	°	°	°	"	"	°	°	
Oct. 20	357.02	290.40	−18.58	13.91	1.74	70.29	41.41	0.634
22	356.45	271.22	18.94	13.64	1.73	70.16	41.70	0.607
24	355.86	252.01	19.30	13.38	1.72	70.03	41.96	0.582
26	355.25	232.77	19.65	13.13	1.70	69.89	42.20	0.558
28	354.64	213.50	−20.00	12.88	1.69	69.75	42.42	0.536
30	354.01	194.21	20.34	12.64	1.67	69.60	42.62	0.515
Nov. 1	353.38	174.90	20.68	12.41	1.65	69.45	42.80	0.494
3	352.73	155.56	21.02	12.18	1.63	69.30	42.96	0.475
5	352.07	136.20	21.35	11.96	1.61	69.15	43.10	0.456
7	351.40	106.82	−21.67	11.74	1.59	68.99	43.22	0.438
9	350.73	97.41	21.98	11.53	1.57	68.84	43.32	0.421
11	350.05	77.98	22.28	11.33	1.55	68.69	43.41	0.405
13	349.37	58.54	22.58	11.13	1.53	68.54	43.48	0.390
15	348.68	39.08	22.87	10.93	1.50	68.39	43.54	0.375
17	347.98	19.60	−23.14	10.74	1.48	68.24	43.58	0.361
19	347.28	0.10	23.41	10.56	1.46	68.10	43.61	0.348
21	346.57	340.58	23.67	10.38	1.43	67.96	43.63	0.335
23	345.86	321.05	23.91	10.20	1.41	67.82	43.63	0.323
25	345.15	301.50	24.14	10.03	1.38	67.70	43.61	0.312
27	344.44	281.94	−24.36	9.86	1.36	67.58	43.59	0.301
29	343.72	262.36	24.57	9.70	1.34	67.46	43.55	0.290
Dec. 1	343.00	242.77	24.76	9.54	1.31	67.35	43.51	0.280
3	342.29	223.16	24.94	9.39	1.29	67.24	43.45	0.270
5	341.58	203.54	25.11	9.24	1.26	67.14	43.38	0.261
7	340.87	183.92	−25.26	9.10	1.24	67.05	43.30	0.252
9	340.16	164.28	25.40	8.95	1.21	66.97	43.21	0.244
11	339.46	144.64	25.53	8.81	1.19	66.89	43.12	0.236
13	338.76	124.98	25.64	8.68	1.17	66.82	43.02	0.228
15	338.07	105.32	25.73	8.55	1.14	66.76	42.90	0.221
17	337.38	85.65	−25.81	8.42	1.12	66.71	42.78	0.214
19	336.70	65.97	25.87	8.29	1.10	66.66	42.65	0.207
21	336.03	46.28	25.92	8.17	1.07	66.63	42.51	0.200
23	335.36	26.59	25.95	8.05	1.05	66.60	42.36	0.194
25	334.70	6.90	25.96	7.93	1.03	66.59	42.21	0.188
27	334.05	347.20	−25.96	7.82	1.01	66.58	42.05	0.182
29	333.42	327.50	25.94	7.71	0.98	66.58	41.88	0.177
31	333.79	307.79	−25.91	7.60	0.96	66.59	41.70	0.172

1892MNRAS..52..398M

The differences of successive values of the areographical longitude of the centre of the planet's disc amount, for an interval of two days, to about 19° less than two rotations, so that the greatest difference, at the beginning of August, is 702°·30, and the smallest, at the end of December, 700°·29.

Q denotes the position-angle and *q* the amount of the greatest defect of illumination, E the areocentric angle between Earth and Sun. The last column gives the ratio of the apparent brightness of *Mars* to that at mean opposition, the diminution of brightness due to the defect of illumination being assumed to depend simply on the proportion of the unilluminated portion to the whole of the disc.

The data of the ephemeris are founded upon the same elements as those for the oppositions of 1886, 1888, and 1890, and are to be interpolated directly for the times for which they are required, the equation of light having already been taken into account.

The adopted zero-meridian will apparently pass the centre of the disc at the following Greenwich mean times :—

1892.	h	m	1892.	h	m	1892.	h	m
Apr. 30	18	35·7	May 25	10	17·1	June 19	1	44·7
May 1	19	15·1	26	10	56·1	20	2	22·8
2	19	54·4	27	11	35·1	21	3	2·0
3	20	33·8	28	12	14·0	22	3	39·1
4	21	13·1	29	12	52·9	23	4	17·1
5	21	52·5	30	13	31·8	24	4	55·1
6	22	31·8	31	14	10·7	25	5	33·0
7	23	11·1	June 1	14	49·6	26	6	10·9
8	23	50·4	2	15	28·4	27	6	48·7
10	0	29·7	3	16	7·2	28	7	26·5
11	1	9·0	4	16	45·9	29	8	4·3
12	1	48·2	5	17	24·6	30	8	42·0
13	2	27·5	6	18	3·3	July 1	9	19·6
14	3	6·7	7	18	42·0	2	9	57·1
15	3	45·9	8	19	20·6	3	10	34·6
16	4	25·1	9	19	59·2	4	11	12·1
17	5	4·3	10	20	37·7	5	11	49·5
18	5	43·5	11	21	16·2	6	12	26·9
19	6	22·6	12	21	54·7	7	13	4·2
20	7	1·8	13	22	33·1	8	13	41·5
21	7	40·9	14	23	11·5	9	14	18·7
22	8	20·0	15	23	49·9	10	14	55·8
23	8	59·0	17	0	28·2	11	15	32·9
24	9	38·1	18	1	6·4	12	16	9·9

1892MNRAS..52..398M

1892.	h	m	1892.	h	m	1892.	h	m
July 13	16	46·9	Aug. 23	17	7·0	Oct. 3	18	20·2
14	17	23·8	24	17	43·8	4	18	59·0
15	18	0·7	25	18	20·6	5	19	37·9
16	18	37·5	26	18	57·5	6	20	16·8
17	19	14·3	27	19	34·5	7	20	55·8
18	19	51·1	28	20	11·5	8	21	34·8
19	20	27·8	29	20	48·5	9	22	13·8
20	21	4·4	30	21	25·6	10	22	52·8
21	21	41·0	31	22	2·8	11	23	31·9
22	22	17·6	Sept. 1	22	40·0	13	0	11·1
23	22	54·1	2	23	17·3	14	0	50·3
24	23	30·6	3	23	54·6	15	1	29·5
26	0	7·1	5	0	32·0	16	2	8·7
27	0	43·5	6	1	9·4	17	2	48·0
28	1	19·9	7	1	46·9	18	3	27·3
29	1	56·3	8	2	24·5	19	4	6·6
30	2	32·6	9	3	2·1	20	4	46·0
31	3	19·0	10	3	39·8	21	5	25·4
Aug. 1	3	45·3	11	4	17·5	22	6	4·8
2	4	21·7	12	4	55·3	23	6	44·3
3	4	58·0	13	5	33·1	24	7	23·8
4	5	34·3	14	6	11·0	25	8	3·3
5	6	10·6	15	6	48·9	26	8	42·9
6	6	46·9	16	7	26·9	27	9	22·5
7	7	23·2	17	8	4·9	28	10	2·1
8	7	59·5	18	8	43·0	29	10	41·8
9	8	35·8	19	9	21·1	30	11	21·4
10	9	12·1	20	9	59·3	31	12	1·1
11	9	48·5	21	10	37·6	Nov. 1	12	40·8
12	10	24·9	22	11	15·9	2	13	20·6
13	11	1·3	23	11	54·2	3	14	0·4
14	11	37·7	24	12	32·6	4	14	40·2
15	12	14·1	25	13	11·0	5	15	20·0
16	12	50·6	26	13	49·5	6	15	59·8
17	13	27·1	27	14	28·0	7	16	39·7
18	14	3·7	28	15	6·6	8	17	19·6
19	14	40·3	29	15	45·2	9	17	59·5
20	15	16·9	30	16	23·9	10	18	39·4
21	15	53·5	Oct. 1	17	2·6	11	19	19·4
22	16	30·2	2	17	41·4	12	19	59·3

1892MNRAS..52..398M

1892.	h	m	1892.	h	m	1892.	h	m
Nov. 13	20	39·3	Nov. 30	7	21·8	Dec. 16	18	7·8
14	21	19·3	Dec. 1	8	2·1	17	18	48·2
15	21	59·4	2	8	42·4	18	19	28·7
16	22	39·4	3	9	22·7	19	20	9·2
17	23	19·5	4	10	3·0	20	20	49·7
18	23	59·6	5	10	43·4	21	21	30·2
20	0	39·7	6	11	23·7	22	22	10·7
21	1	19·8	7	12	4·1	23	22	51·2
22	2	0·0	8	12	44·4	24	23	31·7
23	2	40·2	9	13	24·8	26	0	12·2
24	3	20·4	10	14	5·2	27	0	52·7
25	4	0·6	11	14	45·6	28	1	33·2
26	4	40·8	12	15	26·0	29	2	13·7
27	5	21·0	13	16	6·5	30	2	54·2
28	6	1·2	14	16	46·9	31	3	34·7
29	6	41·5	15	17	27·3			

Col. Cooper's Observatory:
Markree, Collooney, Ireland.

Errata in Mr. Jacoby's Papers.

Page 109, opposite $\phi = 37^\circ\ 50'$, column A, *for* 1 35 57·93 *read* 1 34 57·93
,, 110 ,, $\phi = 40\ 10$,, y ,, + ·0663 *read* + 0563
,, 113 ,, $\phi = 54\ 20$,, y, insert the difference 6
,, *ib.* ,, $\phi = 55\ 0$,, x (difference), *for* 74 *read* 72
,, 115, line 15, *for* of the *read* after
,, 115, in the equation strike out letter B
,, 116, equation (a), in first term, *for* z *read* x

Erratum in Professor Oudemans' Paper.

At bottom of page 159 (before the note) add the following words:

Accordingly, in my opinion, the dark line seen October 29 and November 3 must be taken for the dusky ring, projected on the planet.